



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/075,362	02/14/2002	Kunio Shimizu	KON-1714	8865
20311	7590	12/16/2003	EXAMINER	
MUSERLIAN AND LUCAS AND MERCANTI, LLP 475 PARK AVENUE SOUTH NEW YORK, NY 10016			HON, SOW FUN	
			ART UNIT	PAPER NUMBER
			1772	

DATE MAILED: 12/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/075,362

Applicant(s)

SHIMIZU ET AL.

Examiner

Sow-Fun Hon

Art Unit

1772

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)                      4) ☒ Interview Summary (PTO-413) Paper No(s). 3.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_ .                      6) ☐ Other: \_\_\_\_\_

Art Unit: 1772

**DETAILED ACTION**

**DETAILED ACTION**

***Election/Restrictions***

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-10, drawn to an article, classified in class 428, subclass 1.31.
- II. Claims 11-20, drawn to a method, classified in class 264, subclass 1.34.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions II and I are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the cellulose ester film may be made by flashing off the solvent instead of drying the web for 30 to 90 seconds on the support.

3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

4. During a telephone conversation with Don Lucas on April 16, 2003 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-10, 19-20. Affirmation of this election must be made by applicant in replying to this Office action. Claims 11-18 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Art Unit: 1772

5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

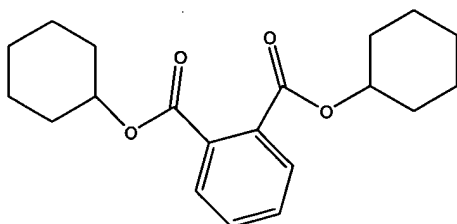
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-6, 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Van Every (US 2,364,112), as evidenced by Morflex, Inc.

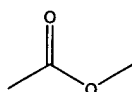
Van Every has a cellulose ester film (cellulose nitrate is a species of cellulose ester) (column 3a, line 50) comprising a compound represented by one embodiment of claimed formula (1) on the next page), in an amount of 3.89 % which is within the claimed range of 1 to 30 % by weight (column 3a, lines 30-35), in the form of dicyclohexyl phthalate as evidenced by Morflex, Inc.

Morflex, Inc. shows that dicyclohexyl phthalate has the claimed structure on the next page as defined by Applicant's specification (page 18, figure 1-16).

Art Unit: 1772



In this specific embodiment, Y of Applicant represents an ester bond, or a divalent organic group containing an ester bond which is the functional group below:



and  $R_a = -C(=O)OR_c$  wherein  $R_c$  = unsubstituted cyclohexyl group, and wherein  $m = 1$  and  $n = 0$  so that  $R_b = 0$ .

Van Every further teaches that the UV absorbent in the cellulose ester film functions satisfactorily when the thickness of the film is greater than either 22  $\mu\text{m}$  (0.00088 in.) or 1.27  $\mu\text{m}$  (0.00005 in.) (column 5b, lines 10-20), which respectively overlaps or encompasses the claimed range of from 10 to 60  $\mu\text{m}$ .

Claims 2-3, 5 are dependent on claim 1, and form part of the Markush group of which the embodiment above is one component. Claims 2-3, 5 form embodiments which are different from the one embodiment of Applicant's formula (1) above, and are addressed below to further advance prosecution.

### ***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

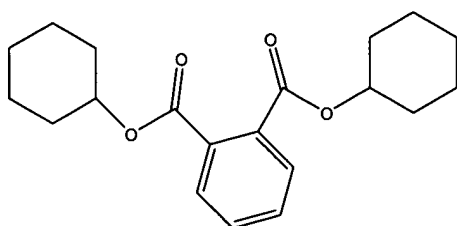
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

Art Unit: 1772

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 2-3, 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Van Every as evidenced by Morflex, Inc.

Van Every has been discussed above, and teaches a cellulose ester film comprising a compound with one of the claimed embodiments of Applicant's formula (1) shown below.



With respect to claims 2-3, the alternate Markush group embodiments of Y of Applicant, where  $Y = R^1C(=O)O-$ ,  $-C(=O)OR^2$ ,  $-C(=O)O-R^3-OC(=O)-$ ,  $-OC(=O)-R^4-C(=O)O-$ , wherein  $R^1 = R^2 = R^3 = R^4 =$  substituted or unsubstituted alkylene group, are homologs of the compound shown above, and are thus obvious variations in the absence of a showing of unexpected results.

With respect to claim 5, the alternate Markush group embodiment of  $n = 1$  to 5 means that there is a substituent group  $R_b$  of Applicant on the cyclohexyl group on the right of the structure shown above. Since  $R_b$  can be an alkyl group (see claim 2), the alternate Markush group embodiments of Y of Applicant are homologs of the compound shown above, and are thus also obvious variations in the absence of a showing of unexpected results.

10. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Van Every as evidenced by Morflex, Inc. as applied to claims 2-3, 5 above, and further in view of Joseph (US 2,038,114).

Van Every has been discussed above, and teaches a cellulose ester film comprising a compound with one of the claimed embodiments of Applicant's formula (1). Van Every teaches

Art Unit: 1772

that the cellulose ester film is a light filter (column 1b, lines 35-45) and may be used for photographic filters (column 5b, lines 50-60) wherein the light in the near ultra-violet region is absorbed and the light in the visible region is transmitted (column 1b, lines 40-50).

Van Every teaches that the UV absorbent (bis-[(amino-benzamido-)benzamido-] di-sulfonated stilbene) is soluble in 94 % water (column 2a, lines 55-65) which indicates that the UV absorbent has a high water solubility and thus a low distribution coefficient as defined by Applicant's disclosure (page 32, paragraph 4) and most likely does not have a distribution coefficient of not less than 8.5. Van Every teaches that the solvent for forming the cellulose ester film is non-aqueous, and comprises predominantly ethyl acetate (column 3a, line 55).

Joseph teaches a cellulose ester film (acetate sheet) (column 1a, line 25) which comprises a UV absorbent which is transparent (colorless) in the visible light region and absorbs (opaque) to ultra violet light (column 1b, lines 20-25). Joseph teaches that the particular UV absorbent (light-absorbing substance) depends on the method of manufacture of the film (sheet) material which will determine whether or not to use a compound with a low distribution coefficient (soluble in water) or with a high distribution coefficient (soluble in alcohol which is the genus of the solvent n-octanol named in Applicant's disclosure) (page 32, paragraph 4).

Van Every teaches that the solvent for forming the cellulose ester film is non-aqueous, and comprises predominantly ethyl acetate (column 3a, line 55). In order to be well dispersed, both absorbent and cellulose ester must be soluble in the solvent used. Thus it would have been obvious to one of ordinary skill in the art to have used a UV absorbent having a distribution coefficient which is at least 8.5, as taught by Joseph, in the invention of Van Every in order to

Art Unit: 1772

obtain a UV absorbing light filter wherein the UV absorbent is well dispersed in the cellulose ester film.

11. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Van Every as evidenced by Morflex, Inc. as applied to claims 2-3, 5 above, and further in view of Snaper (US 3,391,296).

Van Every has been discussed above, and teaches a cellulose ester film comprising a compound with one of the claimed embodiments of Applicant's formula (1). Van Every teaches that the cellulose ester film is a light filter (column 1b, lines 35-45), but fails to teach the presence of silicon oxide particles.

Snaper has a display (television) (column 1, lines 30-35) which comprises a polarizing plate wherein the birefringent material can be a colored light filter made to produce any color of the (visible) spectrum, which region is controlled by the material chosen (column 1, lines 60-70). The birefringent material can be a solid solution of a plasticizer, cellulose ester (nitrate, acetate) and silicon oxide (oxide of silicon) (column 3, lines 30-35). The silicon oxide particles (crystals) are disclosed as having the quality of birefringence desired (column 3, lines 30-40).

Therefore it would have been obvious to one of ordinary skill in the art to have used silicon oxide particles as taught by Snaper in the cellulose ester film in the invention of Van Every in order to produce a colored light filter with control of the visible range of light that is transmitted.

11. Claims 9, 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Van Every as evidenced by Morflex, Inc. as applied to claims 2-3, 5 above, and further in view of Claussen et al.

Art Unit: 1772

Van Every has been discussed above, and teaches a cellulose ester film comprising a compound with one of the claimed embodiments of Applicant's formula (1). The cellulose ester can also be cellulose acetate as well as cellulose nitrate (column 5a, lines 55-60). Van Every teaches that the cellulose ester film is a light filter (column 1b, lines 35-45) and may be used for photographic filters (column 5b, lines 50-60) wherein the light in the near ultra-violet region is absorbed and the light in the visible region is transmitted (column 1b, lines 40-50).

Van Every fails to teach that the cellulose ester has a total acyl substitution degree of from 2.55 to 2.85, that the film is used in a polarizing plate in a liquid crystal display.

Claussen et al. teaches a liquid crystal display (column 1, lines 1-10) in which a polarizing plate (filter) (column 6, lines 55-60) is comprised of a plastic film (foil) (column 2, lines 30-35) which can comprise a cellulose ester having an acyl substitution degree (acetic acid content) of 2-7 % (column 6, lines 10-15). This range encompasses the claimed range of from 2.55 to 2.85.

Since Claussen et al. teaches that the cellulose ester film is used as a polarizing filter plate in a liquid crystal display, and Van Every teaches that the cellulose ester film can be used as a photographic light filter, it would have been obvious to one of ordinary skill in the art to have used the acyl substitution taught by Claussen et al. for the cellulose ester film of Van Every in order to obtain a polarizing plate in a liquid crystal display.

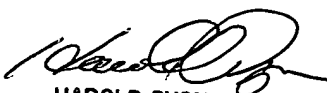
Any inquiry concerning this communication should be directed to Sow-Fun Hon whose telephone number is (703)308-3265. The examiner can normally be reached Monday to Friday from 9:00 AM to 6:00 PM.

Art Unit: 1772

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon, can be reached on (703)308-4251. The fax phone number for the organization where this application or proceeding is assigned is (703)872-9310.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0661.

SH  
Sow-Fun Hon  
12/11/03

  
HAROLD PYON  
SUPERVISORY PATENT EXAMINER  
1772

12/12/03